A PLASTIC, THERMALLY STABLE, LASER DIODE COUPLER

Abstract

An optical system for focusing or collimating light from a semiconductor laser uses a combination of glass and plastic lenses. The glass lens provides a spherical surface for collimating the highly diverging light. The glass lens is relatively inexpensive, and is relatively thermally stable. The plastic lens provides correction for spherical aberration introduced by the glass lens, and may have an aspheric surface. A third lens may be used for focusing the light to a target. The third lens may be glass or plastic. Since the optical power of the plastic lens is low, the overall performance of the optical system is thermally stable, despite the use of plastic components.